UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,401	03/17/2005	Katsumi Kaneko	450100-05167	2507

7590 11/20/2008

William S Frommer
Frommer Lawrence & Haug
745 Fifth Avenue
New York, NY 10151

EXAMINER	
HERNANDEZ, NELSON D	
ART UNIT	PAPER NUMBER
2622	
MAIL DATE	DELIVERY MODE
11/20/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,401	KANEKO ET AL.	
	Examiner	Art Unit	
	Nelson D. Hernández Hernández	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *15 and 16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7,14 and 17* is/are rejected.

7)☒ Claim(s) *4-6 and 8-13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of **Species 1 (claims 1-14 and 17)** in the reply filed on July 22, 2008 is acknowledged.

Claim Objections

2. Claim 3 is objected to because of the following informalities: in line 6, the word "staring" should be written as "starting". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asada et al., US 2002/0021364 A1 in view of Umei, US Patent 5,815,211.

Regarding claim 1, Asada et al. discloses an image pick-up device (See fig. 8) comprising: image signal generation means (CCD 1 as shown in fig. 8) for generating an image signal of a variable frame-rate picked-up image (With the control of timing using the CCD driver 2 and the drive pulse switching circuit 3 as shown in fig. 8; see

explanation of elements 2 and 3 as shown in page 3, ¶ 0040-0043; page 4, ¶ 0055); drive-and-control means (CCD Driver 2 on combination with the Camera Signal Processing Circuit 5 as shown in fig. 8) for driving and controlling the image signal generation means; output means for outputting the image signal generated by the image signal generation means (See VCR 24 as shown in fig. 8 and reproduced signal converter 25 as shown in figs. 8-10; page 4, ¶ 0055 – page 5, ¶ 0066)).

Asada does not explicitly disclose setting information generation means for generating image pick-up setting information to generate an image signal which is frame-synchronized with the image signal generated by the image signal generation means; and that said output means outputs said image signal generated by the image signal generation means and the image pick-up setting information.

However, Umei discloses an image pickup device (See fig. 2) comprising: image signal generation means (Fig. 2: 6) for generating an image signal; Umei further teaches that the image signal can be varied between multiple speeds as desired by the user (using switch of shutter speed as shown in fig. 2; col. 5, lines 11-15); drive-and-control means (CCD timing generator 8 as shown in fig. 2, which is controlled by a switch for setting the imaging speed. Said switch also communicated to the information signal generator 10, which would store the imaging speed information in the period preceding the useful signal in the video image (see fig. 2; col. 4, lines 30-61)) for driving and controlling the image signal generation means; setting information generation means (Information signal generation 10 in conjunction with video output circuit 11 and synchronizing signal generator 9 as shown in fig. 2) for generating image pick-up setting

information (i.e. Gain, gamma correction, shutter speed and motion mode; col. 4, lines 21-26) to generate an image signal which is frame-synchronized with the image signal generated by the image signal generation means (Col. 3, line 14 – col. 5, line 44); and output means (Information signal generation 10 in conjunction with video output circuit 11 as shown in fig. 2; wherein the operation information output from the information signal generator is superposed into the video output circuit 11) for outputting the image signal generated by the image signal generation means and the image pick-up setting information (Col. 3, line 14 – col. 5, line 44). This would allow an image processing apparatus to process the video signal by using the operational information of the image processing camera.

Therefore, taking the combined teaching of Asada in view of Umei as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of generating operation information of the image pickup device and store said information in synchronization with the video signal as taught in Umei to modify the image pickup device in Asada to have setting information generation means for generating image pick-up setting information having information about the selected frame rate used to capture the video image as the operation information to generate an image signal which is frame-synchronized with the image signal generated by the image signal generation means; and that said output means outputs said image signal generated by the image signal generation means and the image pick-up setting information. The motivation to do so would have been to allow an image processing

apparatus to process the video signal by using the operational information of the image processing camera as suggested by Umei (Col. 2, lines 16-21).

Regarding claim 2, the combined teaching of Asada in view of Umei as discussed and analyzed in claim 1 further teaches that the output means outputs the image signal with the image pick-up setting information being inserted into a blanking interval thereof (in Umei, the information signal is inserted in the blanking period. See fig. 2, col. 4, lines 30-61).

Regarding claim 3, the combined teaching of Asada in view of Umei as discussed and analyzed in claim 1 further teaches that the image pick-up setting information generated by the setting information generation means includes frame rate information (Umei discloses having information such as the shutter speed used when capture the image data. This would suggest to modify the camera in Asada to have the selected frame rate stored as an operation information in synchronization with the video signal as discussed in claim 1); and wherein the drive-and-control means drives and controls the image signal generation means, starting from a frame of the variable frame-rate picked-up image that is given first after the image pick-up setting information is output (Umei discloses that when the imaging speed is set using the shutter speed switch, the instruction of changing the speed (which the Examiner is reading as the image pick-up setting information) is stored in a period before the useful video signal; see fig. 2; col. 4, lines 30-61), by setting a frame rate indicated by the frame rate information contained in the output image pick-up setting information as a frame rate of the variable frame-rate picked-up image (Note that in Umei, the shutter speed is applied

as set by the shutter speed switch, which is also indicated in the operation information, thus the output video having variable speeds of image capture is controlled based on said setting of a particular shutter speed information (which as combined with the Asada reference also suggest the frame rate as the pickup information). Thus the combined teaching of Asada in vie of Umei teaches by setting a frame rate indicated by the frame rate information contained in the output image pick-up setting information as a frame rate of the variable frame-rate picked-up image as claimed). Grounds for rejecting claim 1 apply here.

Regarding claim 17, Asada et al. discloses an image pick-up device (See fig. 8) comprising: image signal generation portion (CCD 1 as shown in fig. 8) for generating an image signal of a variable frame-rate picked-up image (With the control of timing using the CCD driver 2 and the drive pulse switching circuit 3 as shown in fig. 8; see explanation of elements 2 and 3 as shown in page 3, ¶ 0040-0043; page 4, ¶ 0055); a controller (CCD Driver 2 on combination with the Camera Signal Processing Circuit 5 as shown in fig. 8) driving and controlling the image signal generation means; output portion that outputs the image signal generated by the image signal generation portion (See VCR 24 as shown in fig. 8 and reproduced signal converter 25 as shown in figs. 8-10; page 4, ¶ 0055 – page 5, ¶ 0066)).

Asada does not explicitly disclose setting information generation portion for generating image pick-up setting information to generate an image signal which is frame-synchronized with the image signal generated by the image signal generation

portion; and that said output portion outputs said image signal generated by the image signal generation portion and the image pick-up setting information.

However, Umei discloses an image pickup device (See fig. 2) comprising: image signal generation portion (Fig. 2: 6) for generating an image signal; Umei further teaches that the image signal can be varied between multiple speeds as desired by the user (using switch of shutter speed as shown in fig. 2; col. 5, lines 11-15); a controller (CCD timing generator 8 as shown in fig. 2, which is controlled by a switch for setting the imaging speed. Said switch also communicated to the information signal generator 10, which would store the imaging speed information in the period preceding the useful signal in the video image (see fig. 2; col. 4, lines 30-61)) driving and controlling the image signal generation portion; setting information generation portion (Information signal generation 10 in conjunction with video output circuit 11 and synchronizing signal generator 9 as shown in fig. 2) for generating image pick-up setting information (i.e. Gain, gamma correction, shutter speed and motion mode; col. 4, lines 21-26) to generate an image signal which is frame-synchronized with the image signal generated by the image signal generation portion (Col. 3, line 14 – col. 5, line 44); and output portion (Information signal generation 10 in conjunction with video output circuit 11 as shown in fig. 2; wherein the operation information output from the information signal generator is superposed into the video output circuit 11) that outputs the image signal generated by the image signal generation portion and the image pick-up setting information (Col. 3, line 14 – col. 5, line 44). This would allow an image processing

apparatus to process the video signal by using the operational information of the image processing camera.

Therefore, taking the combined teaching of Asada in view of Umei as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of generating operation information of the image pickup device and store said information in synchronization with the video signal as taught in Umei to modify the image pickup device in Asada to have setting information generation portion for generating image pick-up setting information having information about the selected frame rate used to capture the video image as the operation information to generate an image signal which is frame-synchronized with the image signal generated by the image signal generation portion; and that said output portion outputs said image signal generated by the image signal generation portion and the image pick-up setting information. The motivation to do so would have been to allow an image processing apparatus to process the video signal by using the operational information of the image processing camera as suggested by Umei (Col. 2, lines 16-21).

5. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asada et al., US 2002/0021364 A1 in view of Umei, US Patent 5,815,211 and further in view of Weisgerber, US Patent 5,739,894.

Regarding claim 7, Asada et al. discloses an image pick-up device (See fig. 8) comprising: image signal generation means (CCD 1 as shown in fig. 8) for generating an image signal of a variable frame-rate picked-up image (With the control of timing

using the CCD driver 2 and the drive pulse switching circuit 3 as shown in fig. 8; see explanation of elements 2 and 3 as shown in page 3, ¶ 0040-0043; page 4, ¶ 0055); and drive-and-control means (CCD Driver 2 on combination with the Camera Signal Processing Circuit 5 as shown in fig. 8) to generate an image signal that is frame-synchronized with the display frame rate of a display unit (Note that the camera signal processing circuit 5 changes the frame rate of the image signal generated by the image signal generation means and the reproduced signal converter 25, also changes the frame rate of the image signal reproduced by the signal-recording-and-reproducing means into a display frame rate; see page 3, ¶ 0044-0046; page 4, ¶ 0055-0059), and controlling a driving operation of the image signal generation means.

Asada et al. does not explicitly disclose that said drive-and-control means receives image pick-up setting information in order to generate an image signal that is frame-synchronized with the image signal of a reference variable frame-rate picked-up image and that said controlling a driving operation of the image signal generation means is based on this image pick-up setting information, thereby frame-synchronizing the image signal generated by the image signal generation means with the image signal of the reference variable frame-rate picked-up image.

However, Weisgerber discloses the concept of synchronizing two image signals obtained at different frame rate, wherein video image signals taken at a lower frame rate (By either a camera, computer or optical printer (computer animation)) are adjusted to match the frame rate of a video signal obtained at a higher frame rate, wherein the lower frame rate video is adjusted by repeating frames in the video to match the amount

of frames in the higher frame rate video (See figs. 1-3) for further display of an image composition of both video image signals (This teaches the concept of generating image signal that is frame synchronized with the image signal of a reference frame rate picked-up image and frame-synchronizing the image signal generated a particular source with the image signal of a different frame-rate picked-up image) (Col. 4, line 48 – col. 7, line 8). This would help smoothing the video image signal at the time of combining the videos since it would reduce the presence of flicker, motion blur and interpolation of motion that does not appear smooth as suggested by Weisgerber (Col. 4, lines 47-67).

Therefore, taking the combined teaching of Asada et al. in view of Weisgerber as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of generating image signal that is frame synchronized with the image signal of a reference frame rate picked-up image and frame-synchronizing the image signal generated a particular source with the image signal of a different frame-rate picked-up image as taught in Weisgerber to modify the functionality of the drive-and-control means of Asada et al. to also generate an image signal frame-synchronized with the image signal of a reference variable frame-rate picked-up image and controlling a driving operation of the image signal generation means, thereby frame-synchronizing the image signal generated by the image signal generation means with the image signal of the reference variable frame-rate picked-up image. The motivation to do so would have been to help smoothing the video image signal at the time of combining the videos since it would reduce the presence of flicker,

motion blur and interpolation of motion that does not appear smooth as suggested by Weisgerber (Col. 4, lines 47-67).

The combined teaching of Asada et al. in view of Weisgerber fails to teach that said drive-and-control means receives image pick-up setting information in order to generate said image signal and that said controlling said driving operation of said image signal generation means is based on this image pick-up setting information.

However, Umei discloses an image pickup device (See fig. 2) comprising: image signal generation means (Fig. 2: 6) for generating an image signal; Umei further teaches that the image signal can be varied between multiple speeds as desired by the user (using switch of shutter speed as shown in fig. 2; col. 5, lines 11-15); drive-and-control means (CCD timing generator 8 as shown in fig. 2, which is controlled by a switch for setting the imaging speed. Said switch also communicated to the information signal generator 10, which would store the imaging speed information in the period preceding the useful signal in the video image (see fig. 2; col. 4, lines 30-61)) for driving and controlling the image signal generation means; setting information generation means (Information signal generation 10 in conjunction with video output circuit 11 and synchronizing signal generator 9 as shown in fig. 2) for generating image pick-up setting information (i.e. Gain, gamma correction, shutter speed and motion mode; col. 4, lines 21-26) to generate an image signal which is frame-synchronized with the image signal generated by the image signal generation means (Col. 3, line 14 – col. 5, line 44); and output means (Information signal generation 10 in conjunction with video output circuit 11 as shown in fig. 2; wherein the operation information output from the information

signal generator is superposed into the video output circuit 11) for outputting the image signal generated by the image signal generation means and the image pick-up setting information (Col. 3, line 14 – col. 5, line 44). This would allow an image processing apparatus to process the video signal by using the operational information of the image processing camera.

Therefore, taking the combined teaching of Asada et al. in view of Weisgerber and further in view of Umei as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of generating operation information of the image pickup device and use the information in synchronization with the video signal for controlling the generation of the image signal as taught in Umei to modify the image pickup device in Asada et al and Weisgerber to have said drive-and-control means receiving image pick-up setting information in order to generate said image signal and to control said driving operation of said image signal generation means is based on this image pick-up setting information. The motivation to do so would have been to allow an image processing apparatus to process the video signal by using the operational information of the image processing camera as suggested by Umei (Col. 2, lines 16-21).

Regarding claim 14, the combined teaching of Asada et al. in view of Weisgerber and further in view of Umei as discussed and analyzed in claim 7 further teaches output means for outputting an image signal generated by the image signal generation means (See Asada et al., VCR 24 as shown in fig. 8 and reproduced signal

converter 25 as shown in figs. 8-10; page 4, ¶ 0055 – page 5, ¶ 0066)) and the input image pick-up setting information (Umei, col. 3, line 14 – col. 5, line 44).

Allowable Subject Matter

6. **Claims 4-6 and 8-13** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

A claim limitation will be presumed to invoke 35 U.S.C. 112, sixth paragraph, if it meets the following 3-prong analysis:

(A) the claim limitations must use the phrase "means for" or "step for";

(B) the "means for" or "step for" must be modified by functional language; and

(C) the phrase "means for" or "step for" must not be modified by sufficient structure, material, or acts for achieving the specified function.

In light of the limitations presented by independent **claims 4-6 and 8-13** examined under the 35 U.S.C. 112 sixth paragraph standards.

Regarding claim 4, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, that the setting information generation means makes information of a scan line position and a pixel position of an image signal included in the image pick-up setting, said information being generated by the image signal generation means information, including all the limitations of claim 1.

Regarding claim 5, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, holding means for holding a frame rate alteration pattern, wherein when reading the frame rate alteration pattern held in the holding means and instructing a frame rate in accordance with this read frame rate alteration pattern to vary a frame rate of the variable frame-rate picked-up image, the setting information generation means makes information indicating the read frame rate alteration pattern included in the image pick-up setting information; and wherein the drive-and-control means drives and controls the image signal generation means, starting from a frame of the variable frame-rate pricked-up image that is given first after the image pick-up setting information is output, by setting the instructed frame rate as a frame rate of the variable frame-rate picked-up image, including all the limitations of claim 1.

Regarding claim 6, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, a plurality of frame rate instruction means each for instructing a frame rate of the variable frame-rate picked-up image; and operation control means for setting priority sequence to the plurality of frame rate instruction means, to set a frame rate instructed by the frame rate instruction means that has the highest priority as a frame rate of the variable frame-rate picked-up image, wherein the setting information generation means generates image pick-up setting information which is used to generate an image signal that is frame-synchronized with an image signal having the set frame rate of the variable frame-rate picked-up image, including all the limitations of claim 1.

Regarding claim 8, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, that if the image pick-up setting information contains frame rate information indicating a frame rate of the reference variable frame-rate picked-up image, the drive-and-control means drives the image signal generation means, starting from a frame of the variable frame-rate picked-up image that is given first after this image pick-up setting information is input, by setting a frame rate indicated by the frame rate information contained in the input image pick-up setting information as a frame rate of the variable frame-rate picked-up image, including all the limitations of claim 7.

Regarding claim 9, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, that if the image pick-up setting information contains information of a scan line position and a pixel position, the drive-and-control means synchronizes an image signal generated by the image signal generation means with the scan line position and the pixel position, including all the limitations of claim 7.

Regarding claim 10, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, holding means for holding a frame rate alteration pattern, wherein, if the image pick-up setting information includes information which is used to read the frame rate alteration pattern, the holding means reads the frame rate alteration pattern indicated by this information and instructs a frame rate in accordance with this read frame rate alteration pattern; and wherein the drive-and-control means drives the image signal generation means, starting from a

frame of the variable frame-rate picked-up image that is given first after the image pick-up setting information is input, by setting the frame rate instructed by the holding means as a frame rate of the variable frame-rate picked-up image, including all the limitations of claim 7.

Regarding claim 11, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, frame rate instruction means for instructing a frame rate of the variable frame-rate picked-up image; and operation control means for setting priority sequence to the frame rate instructed by the frame rate instruction means and the frame rate based on the image pick-up setting information, to set the frame rate that has higher priority as the frame rate of the variable frame-rate picked-up image, wherein the drive-and-control means drives the image signal generation means by using the frame rate of the variable frame-rate picked-up image as the frame rate that is set by the operation control means, including all the limitations of claim 7.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernández Hernández whose telephone number is (571)272-7311. The examiner can normally be reached on 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nelson D. Hernández Hernández
Examiner
Art Unit 2622

NDHH
November 15, 2008

/NHAN T TRAN/
Primary Examiner, Art Unit 2622